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How Important Are Labor Markets to the Welfare of Indonesia's Poor?

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Because poverty mainly afflicts agricultural and self-employed households in Indonesia, the most direct ways that policy can help to reduce poverty are through improving the operation of product, land, and capital markets, particularly where the regulatory environment now works to reduce farm profitability or inhibit entry to productive enterprises by the poor. Labor market policy can play an important role by facilitating, not impeding, labor mobility across sectors.

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Summary findings

The majority of the poor in Indonesia come from agricultural and self-employed households. About 70 percent of the remaining poor came from rural agricultural households in 1993, and more than 72 percent lived in households that derived the bulk of their income from self-employed enterprises. Moreover, the largest single contribution to poverty reduction between 1990 and 1993 came from within-sector welfare gains to self-employed farm households.

Data show that the role of the labor market in reducing poverty has increased since the mid-1980s. Wage labor markets can be expected to play an increasingly important impact on the welfare of Indonesia's poor as the economy continues to undergo structural change, and as the workforce continues to move out of agriculture into manufacturing and services.

Because poverty remains largely an agricultural and self-employed phenomenon, the most direct way for policy to contribute to reducing poverty is to focus on improving the operation of product, land, and capital markets — particularly where monopolies reduce farm profitability or viability (for example, cloves, oranges) or where excessive regulations raise costs or inhibit entry to productive enterprises by the poor. At the same time, labor market policy can play an important role in the Government of Indonesia's efforts to reduce poverty by helping to facilitate labor mobility across sectors — for example, from low productivity activities in agriculture to higher productivity activities in other sectors.

But if they reduce labor mobility, labor market policies can be counterproductive to Indonesia's poverty reduction efforts. Recent empirical evidence suggests that increases in the minimum wage may have hurt employment growth, particularly among small firms. As such, using minimum wage policy to ensure high wages to a limited number of (mostly nonpoor) workers will almost certainly diminish the poverty reducing potential of the labor market.

This paper — a joint product of the Poverty and Social Policy Department and the Country Operations Division, East Asia and Pacific, Country Department III — is part of a larger study of the labor market in Indonesia undertaken by East Asia and Pacific, Country Department III. It was presented at a joint Ministry of Manpower, Indonesia-World Bank workshop, "Indonesian Workers in the 21st Century," Jakarta, April 2–4, 1996. Copies of this paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Dawn Ballantyne, room S10-147, telephone 202-458-7198, fax 202-522-3237, Internet address dballantyne@worldbank.org. October 1996. (41 pages)

How Important are Labor Markets to the Welfare of the Poor in Indonesia?

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1. Introduction

In 1970, Indonesia was among the poorest countries in the world, with roughly 60 percent of the population living in absolute poverty (World Bank, 1994). Since that time, however, Indonesia has achieved an impressive record of consistent broad-based growth and sustained poverty reduction. Between 1970 and 1993, for example, real GDP grew at an average of over 6 percent a year. Between 1976 and 1990, the proportion of the population living below the official poverty line declined from 40.1 to 15.1 percent; and the number of poor essentially halved, from 54.2 to 27.2 million people (Biro Pusat Statistik, 1992). While these poverty numbers reflect official Government of Indonesia estimates, several studies have shown that recent declines in aggregate poverty are quite robust to different poverty measures (see World Bank, 1993; Wiebe, 1994).

As the Indonesian economy has grown, its structure has changed, as has the structure of the labor force. The share of agriculture and mining in GDP has declined, while the share of manufacturing has grown. Since the mid-1980s, government deregulation policies have given additional impetus to manufacturing, inducing rapid growth of non-oil, often labor-intensive, enterprises. Changes in the labor force broadly reflect changes in the structure of the economy. The share of the labor force in agriculture has declined significantly over time; while roughly two-thirds of the workforce worked in agriculture in 1971, only about one-half of the labor force worked in that sector in 1990. At the same time, the shares in industry and services have increased; between 1971 and 1990, the share of the labor force in industry increased from 10.0 to 16.8 percent[1], while the share in services grew from 24.0 to 32.7 percent (Manning, 1994).

Growth of wage employment in manufacturing and services and in manufactured exports since the late 1980s has led to concerns -- both within Indonesia and from its trading partners -- regarding labor standards and workers' welfare. As a result, the Government of Indonesia has tried increasingly to use policies, such as those on minimum wages, unions, and pensions, to affect labor market outcomes. While recent labor market policy initiatives have often had multiple objectives, the Government has tended to justify policy choices in terms of their impact on workers' welfare or their impact on poverty. For example, recent increases in the Government's minimum wage have been explained largely in terms of ensuring low-skill workers the ability to afford a minimum basket of goods.

But just how important are labor markets to the welfare of the poor? This paper attempts to answer this question by examining linkages between labor market activity and poverty reduction in Indonesia during the early 1990s. Recent research provides several insights into labor market-poverty linkages during the mid-1980s. Using household survey data, Huppi and Ravallion (1991) analyze changes in the sectoral structure of

[1] The share of the labor force in manufacturing grew from 6.5 to 11.6 percent over the same period (World Bank, 1994).

poverty between 1984 and 1987. Their analysis suggests that labor markets played a modest, albeit increasing, role in the welfare of the poor. In 1984, for example, approximately one quarter of the poor came from households whose primary source of income was wage employment. About 59 percent of these households worked in the rural farm sector. In terms of poverty alleviation, about 21 percent of the decline in the national headcount between 1984 and 1987 was due to *within-sector* improvements in living standards among wage-earning households, with over half of this impact resulting from gains to rural, farm-sector households. Population shifts from self-employed to wage-earning sectors -- for example, shifts from self-employed agriculture into employment in service sector jobs -- also appear to have accounted for a several percentage-point decline in aggregate poverty.

Detailed income profiles of self-employed farmers in four provinces also indicate growth in wage earnings among self-employed farmers in Central and East Java, both in absolute terms and as a proportion of total income, between 1984 and 1987. In Central Java, an effective doubling of real wage income among self-employed farm households contributed substantially to declines in poverty over the period. Income from wages did not, however, play a significant role in reducing poverty among self-employed farmers in either East Nusa Tenggara or West Kalimantan. In fact, the relative importance of wage income among the poor in West Kalimantan declined during the period (Huppi and Ravallion, 1991).

While Huppi and Ravallion (1991) provide valuable information on the role labor markets played vis-a-vis the poor during the 1984-87 period, there have been a number of important economic changes in Indonesia since 1987. For example, the Government of Indonesia intensified its trade and industrial deregulation efforts after 1986, helping to fuel a subsequent boom in manufacturing of non-oil exports. The sectoral shares of employment have also continued to change since the mid-1980s. In fact, between 1990 and 1993 the *absolute size* of the agricultural labor force declined for the first time -- by nearly 2 percent.[2] Such developments may well have changed the extent to which labor market earnings affect the welfare of the poor.

Have changes in economic conditions in Indonesia since 1987 substantially increased the role of labor markets in the earnings and welfare of the poor? Has there been a shift from informal sector (e.g., agricultural) to formal sector (e.g., manufacturing and services) wage employment? And, if so, is there an appropriate role for labor market policies in enhancing the opportunities and earnings of the poor? This paper addresses these key questions, using household survey data from Indonesia for 1990 and 1993.

The paper is organized as follows. Following a brief summary of the data and methodology in Section 2, the paper examines the sectoral structure of poverty in Indonesia and how it has changed between 1990 and 1993 (Section 3). Section 4 then explores labor market activities among the poor, focusing on rural, agricultural

[2] National Labor Force Survey (SAKERNAS) 1990 and 1993.

households. In 1993, the Indonesian socio-economic survey, SUSENAS, collected variables on labor force participation and hours worked that facilitate for the first time analysis of the linkages between individuals' labor market characteristics and welfare. Section 5 thus compares the labor market characteristics of the poor with those of the non-poor and highlights the relationships between workers' characteristics, labor market activity, and poverty. The paper concludes by examining what the data imply for labor market policy in the context of the Government of Indonesia's poverty reduction strategy.

2. Data and Methodology

The information on the linkages between labor markets and poverty alleviation in Indonesia discussed in this paper are derived largely from analysis of Indonesia's 1990 and 1993 SUSENAS surveys. SUSENAS is a national consumption/expenditure survey collected every three years in Indonesia. The 1990 survey collected data from a stratified random sample of 45,000 households across Indonesia's 27 provinces, while the 1993 SUSENAS collected data from a sample of nearly 60,000 households. Both the 1990 and 1993 SUSENAS surveys are representative at the province level. Sampling weights, developed by Indonesia's Central Bureau of Statistics (CBS), can be used to draw population-wide inferences. In both 1990 and 1993 SUSENAS, data are available on household consumption expenditure and income, as well as on household demographic characteristics and household members' education levels. In addition, the 1993 SUSENAS also contains data on individuals' labor force labor force participation and hours worked. Insufficient data are available, however, to impute individual-level wages in either the 1990 or 1993 SUSENAS.

The choice of a poverty measure is always to some extent arbitrary. To estimate the sectoral structure of poverty in 1990, this paper relies on poverty lines developed to analyze aggregate and regional poverty in Indonesia in 1990 (World Bank, 1993). These poverty lines provide for regionally consistent estimates of poverty across Indonesia. For 1993, these poverty lines are updated to 1993 Rupiah terms using food and non-food consumer price indexes calculated by CBS for each province. This provides for consistent estimation of the changes in the sectoral structure of poverty over time. The 1990 poverty lines have distinct food and non-food components. These components were inflated to 1993 terms separately using food and non-food CPIs from Indonesia's 27 province capitals. This was done to capture changes in the relative prices of food and non-food items over the period.[3] Alternative poverty measures were applied to the data to help test the robustness of the findings presented in the body of the paper (see Appendix 2). For simplicity of exposition, this paper focuses on a headcount measure of poverty, although the qualitative results are robust to other types of measures, including poverty gap (P_1) or distributionally sensitive poverty (P_2) measures.

[3] CPI data are unavailable for most rural provinces and, as such, no adjustments are made to account for any changes in relative prices between rural and urban prices that may have occurred over the period.

In examining the sectoral structure of poverty and in developing detailed income profiles within specific sectors, the paper draws on the methodology employed in Huppi and Ravallion (1991). Most notably, to assess the sources of reductions in poverty between 1990 and 1993, the paper adopts a decomposition formula that allows one to distinguish the extent to which observed reductions of aggregate poverty are due to *within-sector* improvements in welfare or *population shifts* from one sector to another. The formula is defined as follows. Let P_{it} equal the headcount index (or any other additive, population-weighted poverty measure) for sector i with population share n_i at time t, where there are m such sectors, and t=1990, 1993. Then it can be shown that:

$$P_{93} - P_{90} = \Sigma(P_{i93} - P_{i90})n_{i90} + \Sigma(n_{i93} - n_{i90})P_{i90} + \Sigma(P_{i93} - P_{i90})(n_{i87} - n_{i84})$$

where the summations are over sectors i=1,..., m.

The first term on the left-hand side represents the "intrasectoral effects." This term captures the contribution of within-sector improvements in welfare to poverty reduction, controlling for each sector's base period population share. The second term represents the "population shift effects" and captures how much poverty was reduced from 1990 to 1993 through changes in the sectoral composition of the population over the period. The third term represents the "interaction effects" and captures correlations between intrasectoral changes and population shifts. Because this decomposition can be used to examine the sources of poverty reduction in detail, it is extremely valuable in trying to understand just important the labor market was to poverty reduction between 1990 and 1993.

3. The Sectoral Structure of Poverty

Poverty remains a predominantly rural, agricultural phenomenon in Indonesia. In both 1990 and 1993, average per capita expenditure was lowest and the incidence of poverty highest among wage-earning and self-employed farmers in rural areas (Table 1; Appendix 1). For example, in 1990, the incidence of poverty was 32.4 percent among wage-earning farmers and 27.3 percent among self-employed farmers, compared with 19.2 percent for the population as a whole.[4] Even though the incidence of poverty declined in all sectors except mining[5] between 1990 and 1993, the rural farm households

[4] This figure for the aggregate headcount index for Indonesia differs slightly than the 19.6 percent reported for Indonesia in World Bank (1993). Although the poverty lines and sample weights used in both calculations were the same, the methods of calculation differ slightly. The World Bank (1993) calculations used grouped data to execute the calculations, while the current estimates use unit record data.

[5] The incidence of poverty increased among urban self-employed and rural wage-earning mining households. Together these sectors made up less than 0.5 percent of the Indonesian population in 1990 and 1993. Findings on changes in welfare among urban self-employed mining households should be viewed with caution because of the small number of observations on these households. Because of concern about reliability of estimates with small cell sizes, sectors with sample sizes of less than 100, including self-employed mining, are not presented in Table 1.